FIG. 1

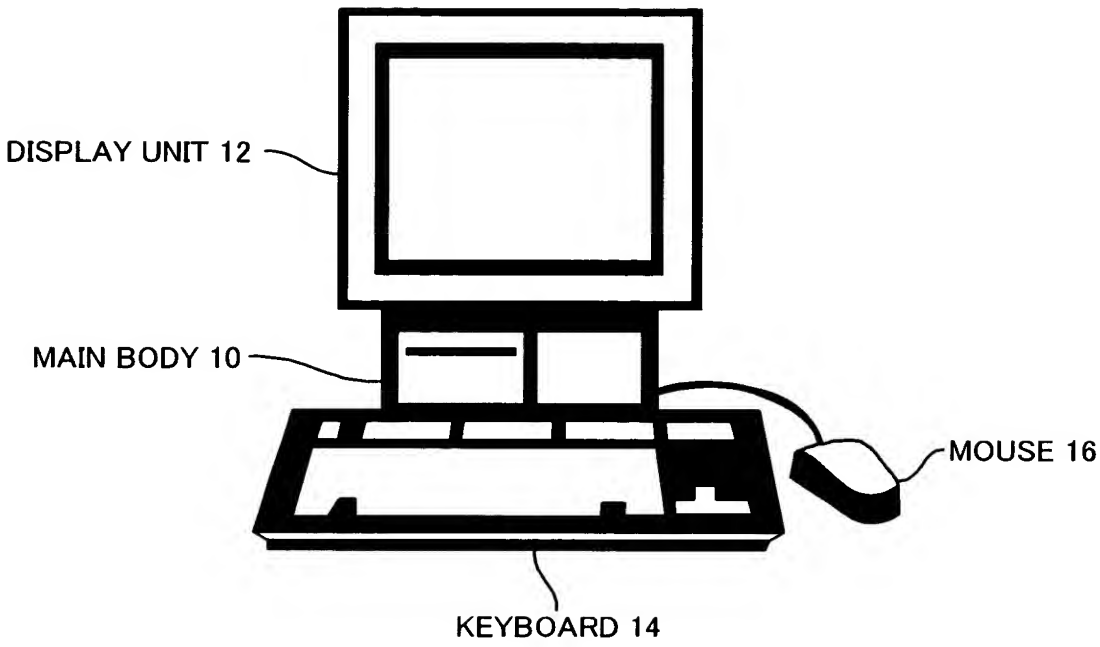


FIG. 2

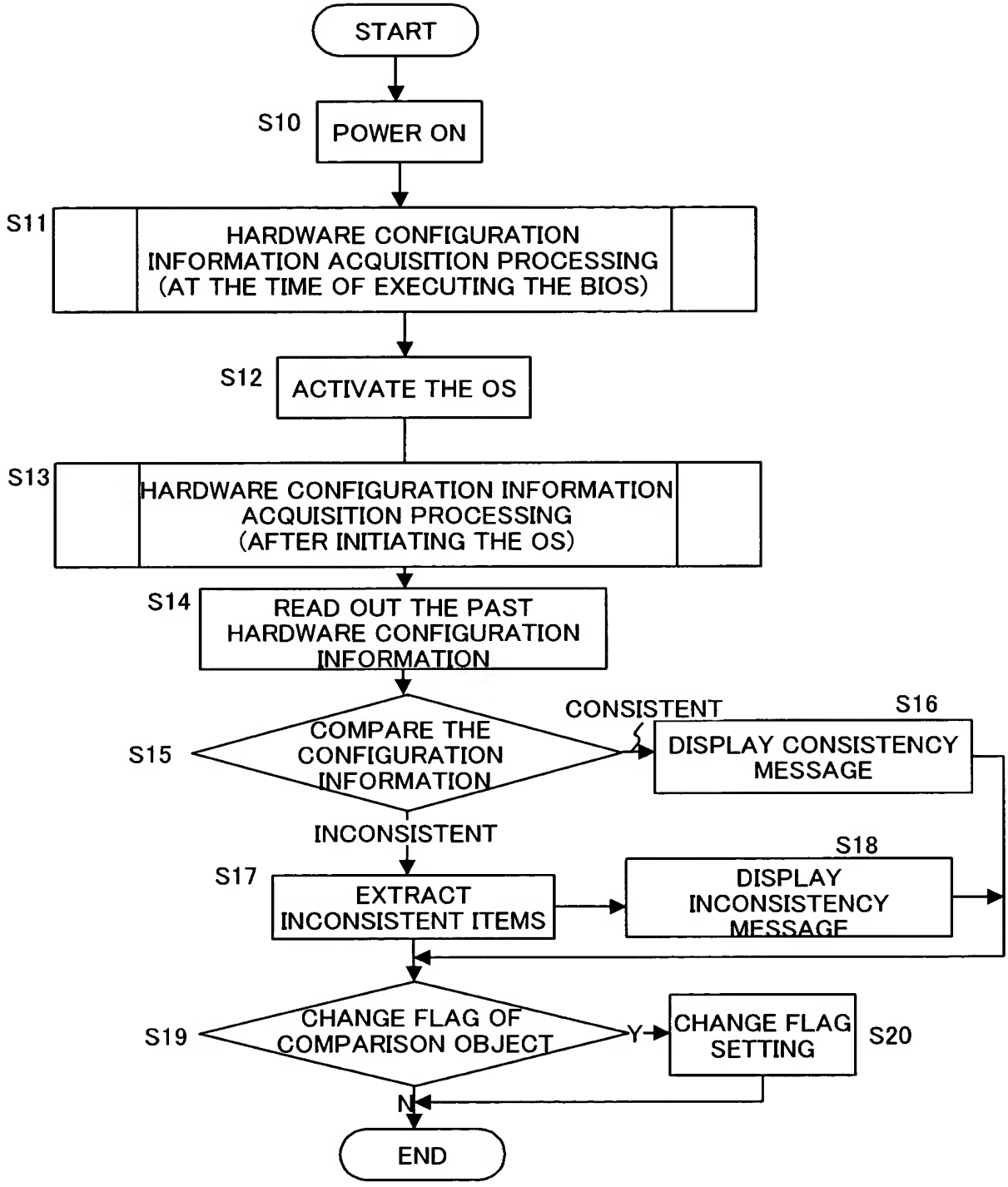

START
S10
POWER ON
S11
HARDWARE CONFIGURATION INFORMATION ACQUISITION PROCESSING (AT THE TIME OF EXECUTING THE BIOS)
S12
ACTIVATE THE OS
S13
HARDWARE CONFIGURATION INFORMATION ACQUISITION PROCESSING (AFTER INITIATING THE OS)
S14
READ OUT THE PAST HARDWARE CONFIGURATION INFORMATION
S15
COMPARE THE CONFIGURATION INFORMATION
CONSISTENT
S16
DISPLAY CONSISTENCY MESSAGE
INCONSISTENT
S17
EXTRACT INCONSISTENT ITEMS
S18
DISPLAY INCONSISTENCY MESSAGE
S19
CHANGE FLAG OF COMPARISON OBJECT
Y
CHANGE FLAG SETTING
S20
N
END

FIG. 3

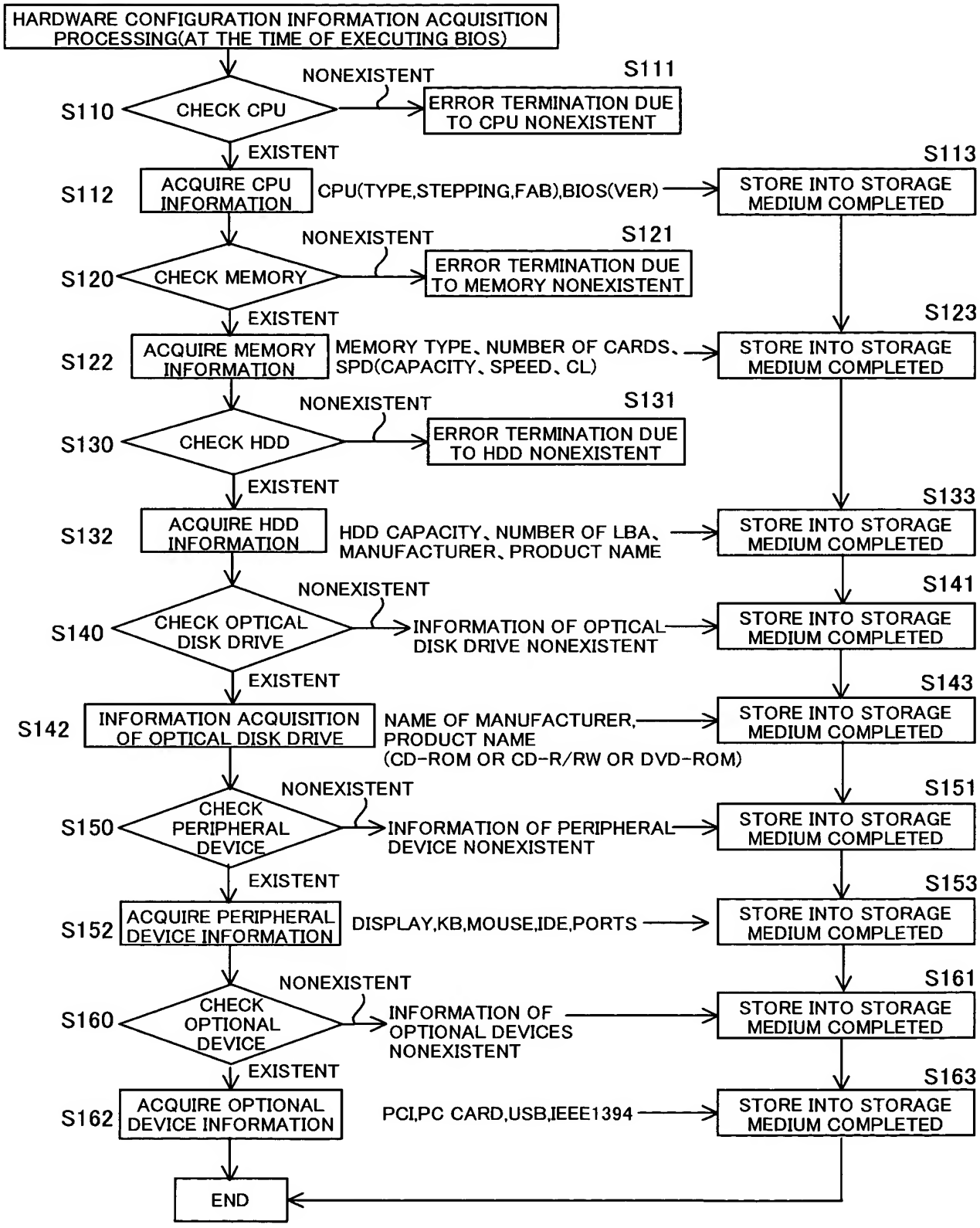

HARDWARE CONFIGURATION INFORMATION ACQUISITION PROCESSING(AT THE TIME OF EXECUTING BIOS)
S110
CHECK CPU
NONEXISTENT
S111
ERROR TERMINATION DUE TO CPU NONEXISTENT
EXISTENT
S112
ACQUIRE CPU INFORMATION
CPU(TYPE,STEPPING,FAB),BIOS(VER)
S113
STORE INTO STORAGE MEDIUM COMPLETED
S120
CHECK MEMORY
NONEXISTENT
S121
ERROR TERMINATION DUE TO MEMORY NONEXISTENT
EXISTENT
S122
ACQUIRE MEMORY INFORMATION
MEMORY TYPE、NUMBER OF CARDS、SPD(CAPACITY、SPEED、CL)
S123
STORE INTO STORAGE MEDIUM COMPLETED
S130
CHECK HDD
NONEXISTENT
S131
ERROR TERMINATION DUE TO HDD NONEXISTENT
EXISTENT
S132
ACQUIRE HDD INFORMATION
HDD CAPACITY、NUMBER OF LBA、MANUFACTURER、PRODUCT NAME
S133
STORE INTO STORAGE MEDIUM COMPLETED
S140
CHECK OPTICAL DISK DRIVE
NONEXISTENT
INFORMATION OF OPTICAL DISK DRIVE NONEXISTENT
S141
STORE INTO STORAGE MEDIUM COMPLETED
EXISTENT
S142
INFORMATION ACQUISITION OF OPTICAL DISK DRIVE
NAME OF MANUFACTURER, PRODUCT NAME (CD-ROM OR CD-R/RW OR DVD-ROM)
S143
STORE INTO STORAGE MEDIUM COMPLETED
S150
CHECK PERIPHERAL DEVICE
NONEXISTENT
INFORMATION OF PERIPHERAL DEVICE NONEXISTENT
S151
STORE INTO STORAGE MEDIUM COMPLETED
EXISTENT
S152
ACQUIRE PERIPHERAL DEVICE INFORMATION
DISPLAY,KB,MOUSE,IDE,PORTS
S153
STORE INTO STORAGE MEDIUM COMPLETED
S160
CHECK OPTIONAL DEVICE
NONEXISTENT
INFORMATION OF OPTIONAL DEVICES NONEXISTENT
S161
STORE INTO STORAGE MEDIUM COMPLETED
EXISTENT
S162
ACQUIRE OPTIONAL DEVICE INFORMATION
PCI,PC CARD,USB,IEEE1394
S163
STORE INTO STORAGE MEDIUM COMPLETED
END

FIG. 4

HARDWARE CONFIGURATION INFORMATION
ACQUIRED AT THE TIME OF EXECUTING BIOS

(a) CPU INFORMATION

CPU : Pentium3-1BGHz,C0 stepping,FAB-E
BIOS : v1.21

(b) MEMORY INFORMATION

Memory : DIMMx2
Slot1=128MB,PC133,CL2
Slot2=256MB,PC133,CL2

(c) HDD INFORMATION

HDD : IDEx2
Primary-Master=20416MB,2607780,Fujitsu,PB16E
Primary-Slave=40020MB,4A8B570,Fujitsu,PB16E

(d) INFORMATION OF OPTICAL DISK DRIVE

Optical Disk Drive : IDEx1
Secondary-Master=Toshiba Combi Drive SD-R1002

(e) INFORMATION OF PERIPHERAL DEVICE

Device :
Display=VL-17WDX1G
Keyboard=USB OneTouchKeyx4 Compact Wireless 109 KB
Mouse=USB scroll Wireless Mouse
IDE=Fujitsu GIGA MO FMC-PD6
Serial Port=Fijitsu FMTA-103

(f) INFORMATION OF OPTIONAL DEVICE

Option :
PCI :
Slot1=FMV-1802 LAN Adapter
Slot2=FMV-127A SCSI Adapter
PC Card :
Slot1=FUJIFILM 32MB SmartMedia MG-32SW
USB :
Port1=Wireless Module
Port2=Fujitsu color page Printer XL-C3100
IEEE1394 :
Port1=Panasonic NV-C7

FIG. 5

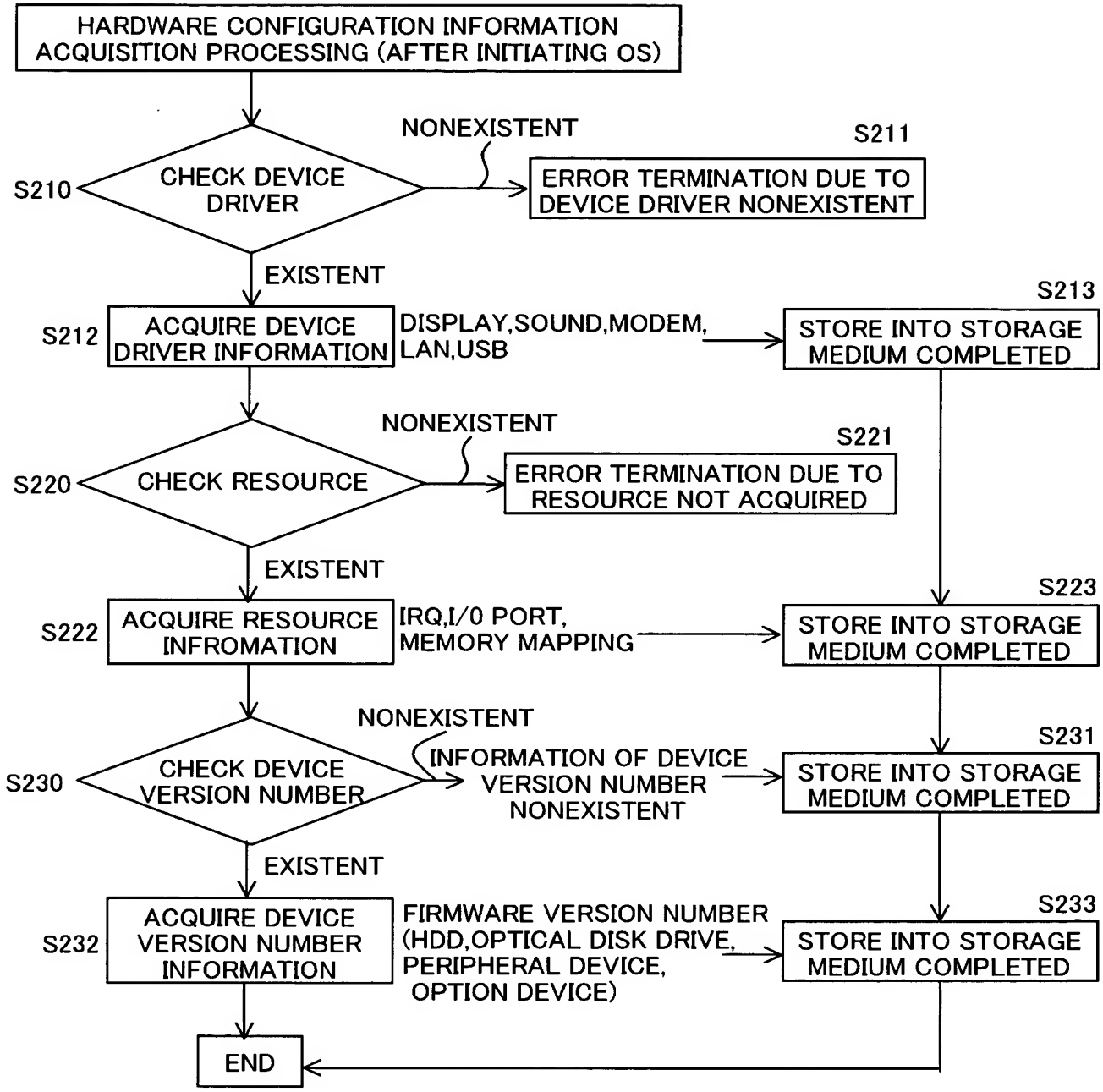

HARDWARE CONFIGURATION INFORMATION ACQUISITION PROCESSING (AFTER INITIATING OS)
S210
CHECK DEVICE DRIVER
NONEXISTENT
S211
ERROR TERMINATION DUE TO DEVICE DRIVER NONEXISTENT
EXISTENT
S212
ACQUIRE DEVICE DRIVER INFORMATION
DISPLAY,SOUND,MODEM, LAN,USB
S213
STORE INTO STORAGE MEDIUM COMPLETED
S220
CHECK RESOURCE
NONEXISTENT
S221
ERROR TERMINATION DUE TO RESOURCE NOT ACQUIRED
EXISTENT
S222
ACQUIRE RESOURCE INFROMATION
IRQ,I/0 PORT, MEMORY MAPPING
S223
STORE INTO STORAGE MEDIUM COMPLETED
S230
CHECK DEVICE VERSION NUMBER
NONEXISTENT
INFORMATION OF DEVICE VERSION NUMBER NONEXISTENT
S231
STORE INTO STORAGE MEDIUM COMPLETED
EXISTENT
S232
ACQUIRE DEVICE VERSION NUMBER INFORMATION
FIRMWARE VERSION NUMBER (HDD,OPTICAL DISK DRIVE, PERIPHERAL DEVICE, OPTION DEVICE)
S233
STORE INTO STORAGE MEDIUM COMPLETED
END

FIG. 6

HARDWARE CONFIGURATION INFORMATION ACQUISITION PROCESSING AFTER INITIATING THE OS

(a) DEVICE DRIVER INFORMATION

Device Driver :
Display=Intel(R) 810e Windows(R) 2000 Display Driver V5.12.01.2636
Sound=Crystal CS4299 WDM Audio Driver for Windows2000 V5.12.4026 L10
Modem=FMV-FX52Z2/FMV-FX52Z2(A) Windows2000 DRIVER V2.30 B2009
LAN=Intel(R) 8255x-based PCI Ethernet Adapter Windows(R) 2000 LAN Driver V5.00.67
SCSI=FMC-SCS3 V3.03

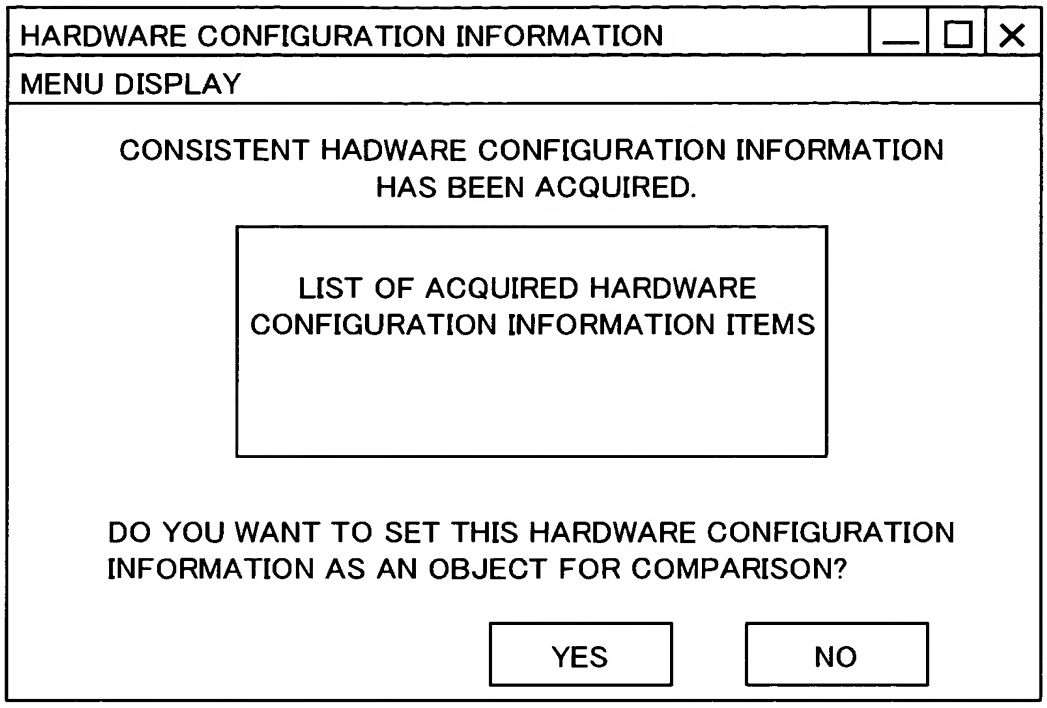
(b) RESOURCE INFORMATION

Resource :
IRQ0=DMA,IRQ1=IDE, ·····
INT0=Timer0,INT1=Timer1, ·····
I/O Port :
0000h=SerialPort0,0002h=SerialPort1,0010h-007Fh=USB, ·····
Memory :
0000h-01FFh=Kernel,0200h-03FFh=INT13, ·····

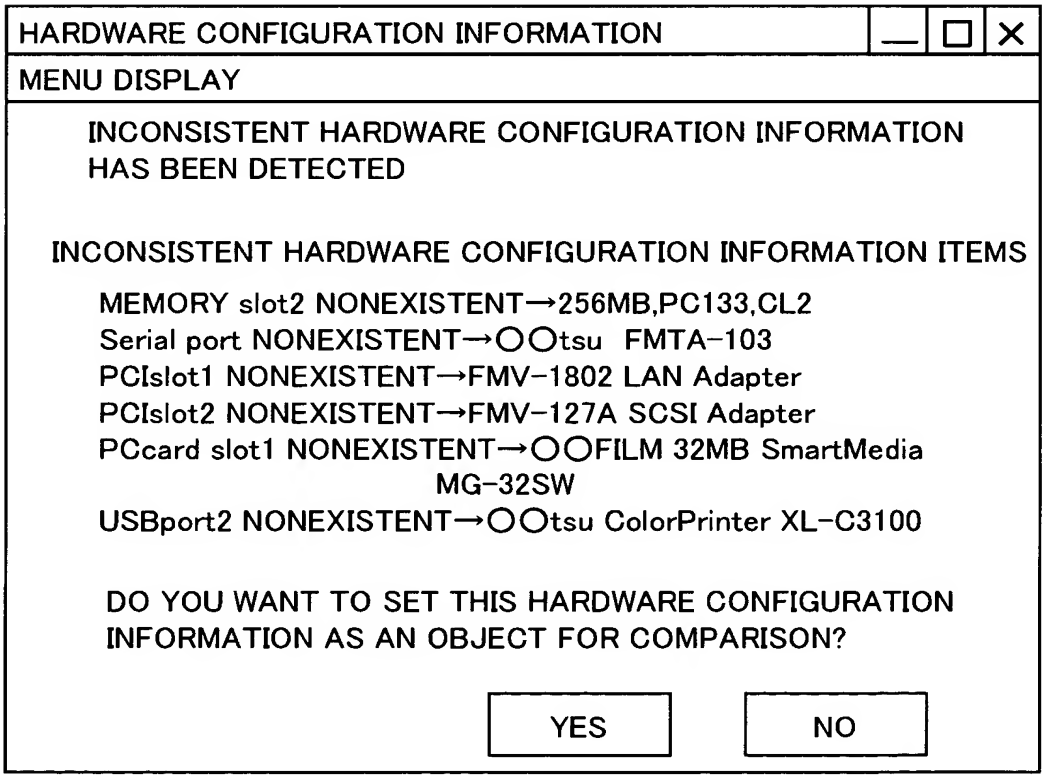
(c) INFORMATION OF DEVICE VERSION NUMBER

HDD : IDEx2
Primary-Master=20416MB,2607780,Fujitsu,PB16E [FirmwareVersion=paso007]
Primary-Slave=40020MB,4A8B570,Fujitsu,PB16E [FirmwareVersion=paso006]
Optical Disk Drive : IDEx1
Secondary-Master=Toshiba Combi Drive SD-R1002 [FirmwareVersion=1.04.3324]
Device :
Display=VL-17WDX1G [FirmwareVersion=Ver.1.10]
Keyboard=USB OneTouchKeyx4 Compact Wireless 109 KB [FirmwareVersion=v1.0]
Mouse=USB scroll Wireless Mouse [FirmwareVersion=v1.0]
IDE=Fujitsu GIGA MO FMC-PD6 [FirmwareVersion=1025]
Serial Port=Fijitsu FMTA-103 [FirmwareVersion=1.30]
Option :
PCI :
Slot1=FMV-1802 LAN Adapter [BIOS Version=1.1]
Slot2=FMV-127A SCSI Adapter [BIOS Version=1.24]
PC Card :
Slot1=FUJIFILM 32MB SmartMedia MG-32SW
USB :
Port1=Wireless Module [FirmwareVersion=v1.0]
Port2=Fujitsu color page Printer XL-C3100 [FirmwareVersion=0.12]
IEEE1394 :
Port1=Panasonic NV-C7 [FirmwareVersion=v1.0]

FIG. 7


HARDWARE CONFIGURATION INFORMATION
MENU DISPLAY
CONSISTENT HADWARE CONFIGURATION INFORMATION HAS BEEN ACQUIRED.
LIST OF ACQUIRED HARDWARE CONFIGURATION INFORMATION ITEMS
DO YOU WANT TO SET THIS HARDWARE CONFIGURATION INFORMATION AS AN OBJECT FOR COMPARISON?
YES
NO

(a)


HARDWARE CONFIGURATION INFORMATION
MENU DISPLAY
INCONSISTENT HARDWARE CONFIGURATION INFORMATION HAS BEEN DETECTED
INCONSISTENT HARDWARE CONFIGURATION INFORMATION ITEMS
MEMORY slot2 NONEXISTENT→256MB,PC133,CL2
Serial port NONEXISTENT→OOtsu FMTA-103
PCIslot1 NONEXISTENT→FMV-1802 LAN Adapter
PCIslot2 NONEXISTENT→FMV-127A SCSI Adapter
PCcard slot1 NONEXISTENT→OOFILM 32MB SmartMedia MG-32SW
USBport2 NONEXISTENT→OOtsu ColorPrinter XL-C3100
DO YOU WANT TO SET THIS HARDWARE CONFIGURATION INFORMATION AS AN OBJECT FOR COMPARISON?
YES
NO

(b)

FIG. 8

EXAMPLE OF HARDWARE CONFIGURATION INFORMATION ACQUIRED AT THE TIME OF EXECUTING BIOS (ACQUIRED IN THE PAST)

(a) CPU INFORAMTION

CPU : Pentium3-1BGHz,C0 stepping,FAB-E
BIOS : v1.10

(b) MEMORY INFORMATION

Memory : DIMMx1
Slot1=128MB,PC133,CL2
Slot2=*

(c) HDD INFORMATION

HDD : IDEx1
Primary-Master=20416MB,2607780,Fujitsu,PB16E
Primary-Slave=*

(d) INFORMATION OF OPTICAL DISK DRIVE

Optical Disk Drive : IDEx1
Secondary-Master=Toshiba Combi Drive SD-R1002

(e) INFORMATION OF PERIPHERAL DEVICE

Device :
Display=VL-17WDX1G
Keyboard=USB OneTouchKeyx4 Compact Wireless 109 KB
Mouse=USB scroll Wireless Mouse
IDE=Fujitsu GIGA MO FMC-PD6
Serial Port=*

(f) INFORMATION OF OPTIONAL DEVICE

Option :
PCI :
Slot1=*
Slot2=*
PC Card :
Slot1=*
USB :
Port1=Wireless Module
Port2=*
IEEE1394 :
Port1=Panasonic NV-C7

FIG. 9

EXAMPLE OF HARDWARE CONFIGURATION INFORMATION ACQUIRED AFTER INITIATING OS (ACQUIRED IN THE PAST)

(a) DEVICE DRIVER INFORMATION

Device Driver :
Display=Intel(R) 810e Windows(R) 2000 Display Driver V5.12.01.2586
Sound=Crystal CS4299 WDM Audio Driver for Windows2000 V5.12.4026 L10
Modem=FMV-FX52Z2/FMV-FX52Z2(A) Windows2000 DRIVER V2.30 B2007
LAN=Intel(R) 8255x-based PCI Ethernet Adapter Windows(R) 2000 LAN Driver V5.00.67
SCSI=FMC-SCS3 V3.03

(b) RESOURCE INFORMATION

Resource :
IRQ0=DMA,IRQ1=IDE, ·····
INT0=Timer0,INT1=Timer1, ·····
I/O Port :
0000h=SerialPort0,0002h=SerialPort1,0010h-007Fh=USB, ·····
Memory :
0000h-01FFh=Kernel,0200h-03FFh=INT13, ·····

(c) INFORMATION OF DEVICE VERSION NUMBER

HDD : IDEx1
Primary-Master=20416MB,2607780,Fujitsu,PB16E [FirmwareVersion=paso007]
Primary-Slave=*
Optical Disk Drive : IDEx1
Secondary-Master=Toshiba Combi Drive SD-R1002 [FirmwareVersion=1.04.3324]
Device :
Display=VL-17WDX1G [FirmwareVersion=Ver.1.10]
Keyboard=USB OneTouchKeyx4 Compact Wireless 109 KB [FirmwareVersion=v1.0]
Mouse=USB scroll Wireless Mouse [FirmwareVersion=v1.0]
IDE=Fujitsu GIGA MO FMC-PD6 [FirmwareVersion=1025]
Serial Port=Fijitsu FMTA-103 [FirmwareVersion=1.30]
Option :
PCI :
Slot1=*
Slot2=*
PC Card :
Slot1=*
USB :
Port1=Wireless Module [FirmwareVersion=v1.0]
Port2=*
IEEE1394 :
Port1=*

FIG. 10

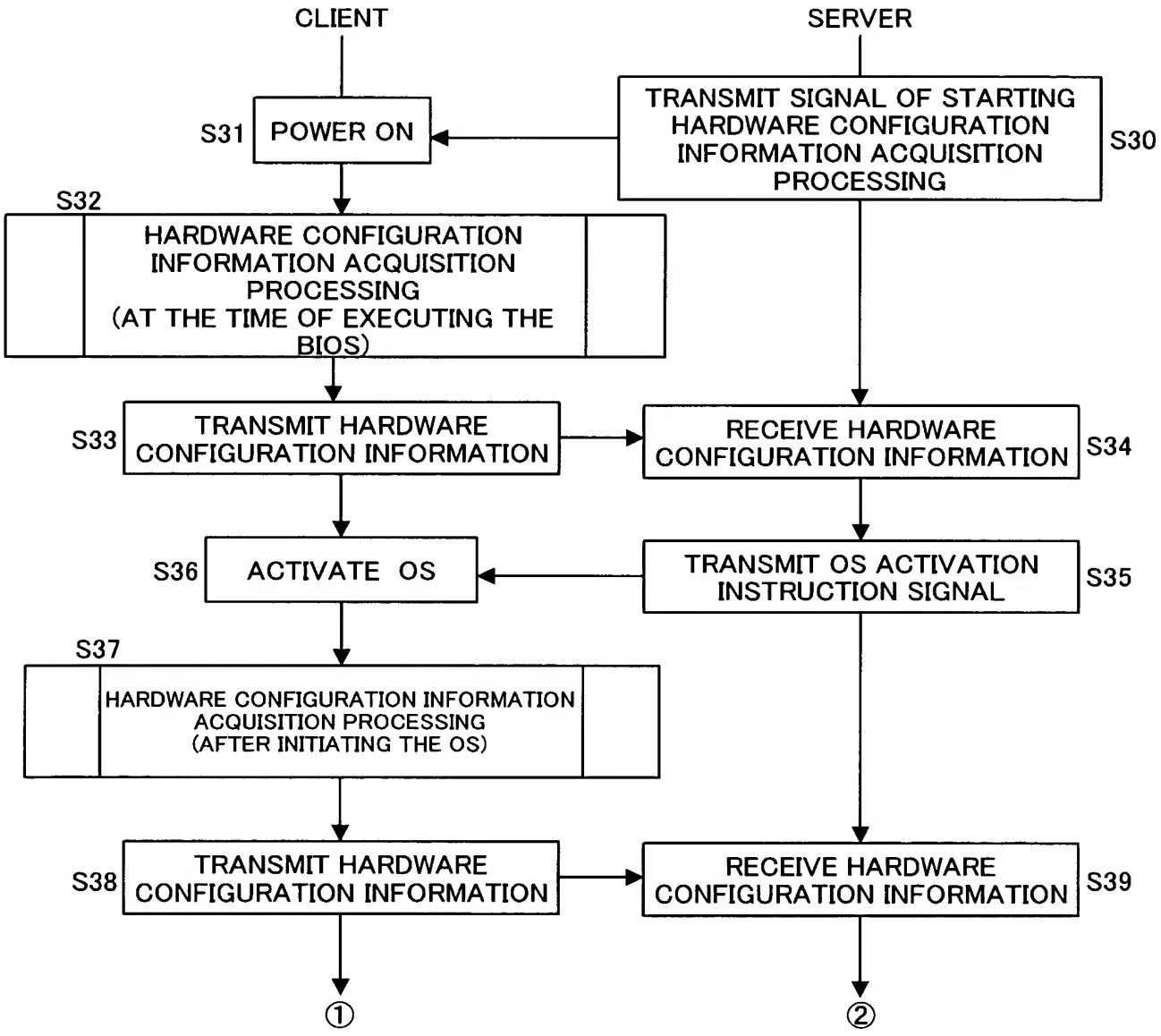
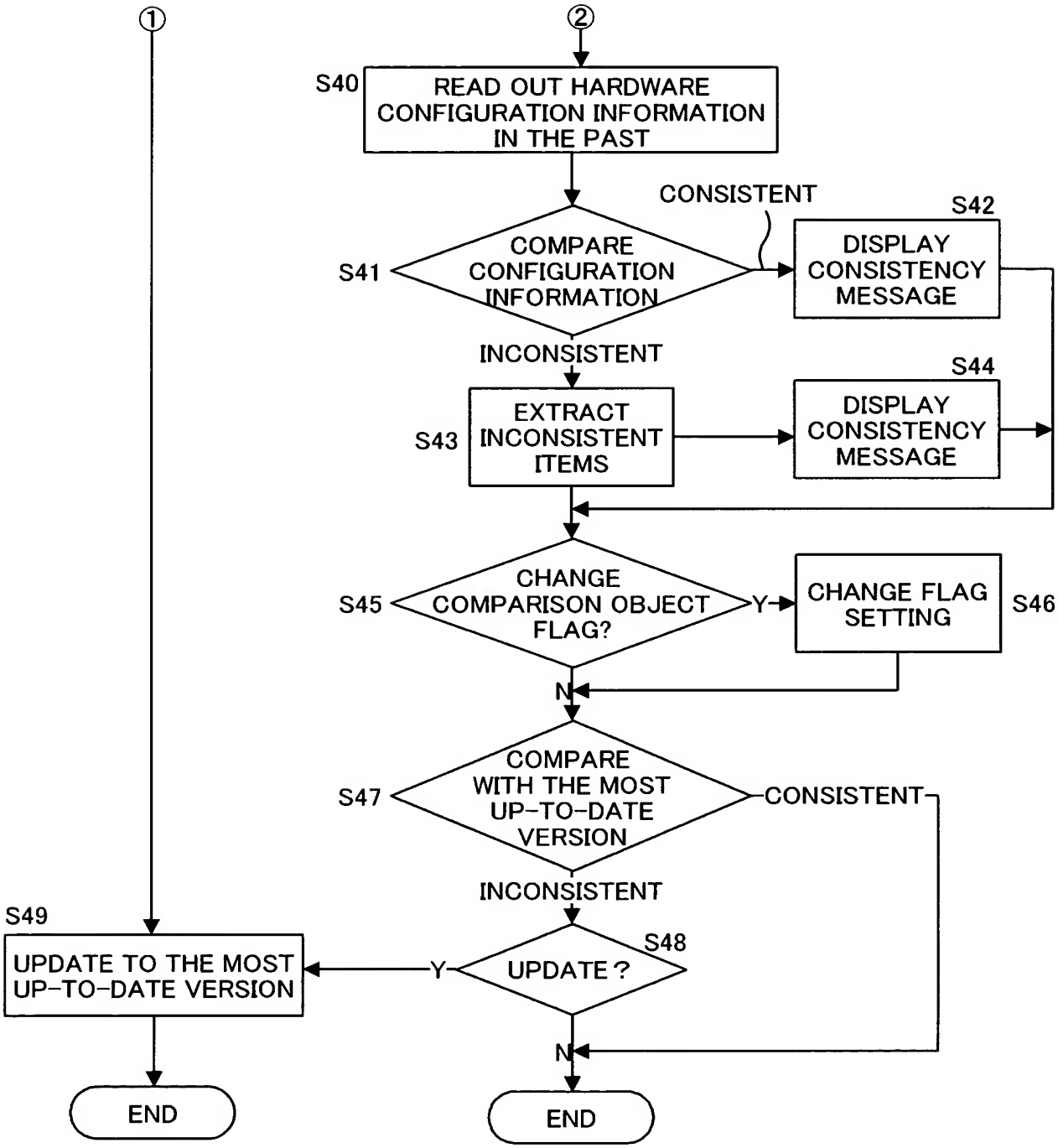

CLIENT
SERVER
TRANSMIT SIGNAL OF STARTING HARDWARE CONFIGURATION INFORMATION ACQUISITION PROCESSING
S30
S31
POWER ON
S32
HARDWARE CONFIGURATION INFORMATION ACQUISITION PROCESSING (AT THE TIME OF EXECUTING THE BIOS)
S33
TRANSMIT HARDWARE CONFIGURATION INFORMATION
RECEIVE HARDWARE CONFIGURATION INFORMATION
S34
S36
ACTIVATE OS
TRANSMIT OS ACTIVATION INSTRUCTION SIGNAL
S35
S37
HARDWARE CONFIGURATION INFORMATION ACQUISITION PROCESSING (AFTER INITIATING THE OS)
S38
TRANSMIT HARDWARE CONFIGURATION INFORMATION
RECEIVE HARDWARE CONFIGURATION INFORMATION
S39
①
②

FIG. 11


①
②
S40
READ OUT HARDWARE CONFIGURATION INFORMATION IN THE PAST
CONSISTENT
S42
S41
COMPARE CONFIGURATION INFORMATION
DISPLAY CONSISTENCY MESSAGE
INCONSISTENT
S44
S43
EXTRACT INCONSISTENT ITEMS
DISPLAY CONSISTENCY MESSAGE
S45
CHANGE COMPARISON OBJECT FLAG?
Y
CHANGE FLAG SETTING
S46
N
S47
COMPARE WITH THE MOST UP-TO-DATE VERSION
CONSISTENT
INCONSISTENT
S49
S48
UPDATE TO THE MOST UP-TO-DATE VERSION
Y
UPDATE ?
N
END
END